

PAINTBALL GUN ANTI-BLOCKING DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention is to provide a paintball gun anti-blocking device, which is to proceed the actuation of paintball gun actuation toward the guns that requires to make an infra-red receiver and infra-red shooter settled inside the inner portion of a gun tube and the upper and lower position of a trigger on the formation of the status of "ON" of which the lights are shielded, and the messages are sent to a substrate of a gun body, thus making it enable to proceed the motion of shooting the paintball by the gun machine sleeved on the end portion of the gun tube.

2. Description of Related Art

The manufacturers develop to manufacture the status of a paintball gun assemble body, in order to achieve the motion of shooting a paintball safely, usually a detection & touching switch will be assembled on the position of a trigger of the gun or inside a gun tube, while the current form of assembly of said detection & touching switch is using in general: one is to assemble a micro-actuating switch on the predetermined position or orientation of the trigger of the gun to be the touch micro-actuating switch after a user's hand pressed the trigger which transfers the message onto a substrate of the gun body which makes the trigger settled inside the gun tube could proceed the paintball which falls into the normal shooting position to proceed the motion of actuation by shooting; however, the restore force of such micro-actuating switch is by means of a spring which is easily to be elastic tired after using one period of time. Another one is by adopting the assembly of a sensor inside the gun tube which is near the bottom lateral such that when the paintball falls into the normal position of shooting, the messages could be transferred onto the substrate of

the gun body to be in cooperation with the normal shooting the paintball after press the trigger.

SUMMARY OF THE INVENTION:

This invention is to provide another anti-blocking device in accordance with
5 the above-mentioned detection mechanism of sensing if the paintball enters into the normal shooting position when the paintball gun is proceed shooting to make the user, when shooting with the paintball gun, could detect exactly if the paintball completes the normal position of waiting for shooting or the actuation by triggering the trigger by means of the blocking switch formed by the infra-red
10 receiver and infra-red shooter settled inside the inner portion of the gun tube and the upper and lower position of the trigger to transfer the message to the substrate of the gun body to be the basis of actuation for the gun to shoot the paintball.

The object of this invention is to provide an infra-red receiver and shooting
15 means on the section near the bottom of the predetermined portion of an inner wall of a gun tube to detect if the lights on both ends are interconnecting when a paintball enters the normal position of which it will form the bomb knocking message of "OFF" status, while if the lights on both ends are blocked, it will form the message of "ON" which means it is O.K. to be ready to shoot;
20 meanwhile there also settles the infra-red receiver and shooting means which is connected from the substrate on the moving limit upper and lower position of the trigger to be the means that detects if the trigger has been triggered to press onto the position of the status of bomb knocking which forms "OFF" message when both lights are interconnecting, while it will form "ON" message which
25 means it is under shoot-able status when both lights are to be blocked; by means of this to be the basis of actuation of shooting the paintball by the trigger when the paintball gun is used to proceed shooting.

The above and other objects, features and advantages of the present invention will become apparent from the following detailed description taken with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

5 FIG. 1 is an exploded view of a preferred embodiment of a paintball gun of this invention;

 FIG. 2 is a perspective view of the paintball gun of this invention;

 FIG. 3 is a side view of the paintball gun of this invention;

 FIG. 4 is a cross sectional view of the paintball gun according to section line
10 11-11 of FIG. 3;

 FIG. 5 is an enlarged detailed view of 12 of FIG. 3.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS:

 This invention provides a means of anti-blocking the bombs of the paintball gun, referring to FIGS. 1 and 2, which is mainly to settle an infra-red receiver 71
15 and infra-red shooter 72 with light-filtration mirrors 75 and 76 covered on the outer peripheral of both ends of an inner tube wall on the front end position near a gun machine 3 of a gun tube 2 which allocates paintballs on a paintball gun 1, the preferred embodiment for the infra-red receiver 71 and infra-red shooter 72 is to install on the position near 1/3 height of the lower portion, as illustrated at
20 the left of FIG. 4. One end of conducting wires 73 and 74 of the receiver 71 and the shooter 72 also connect onto a substrate 5 assembled inside a gun body 4, besides, the paintball gun 1 is used to control to sleeve into a trigger 6 of actuating by the gun machine 3 inside the rear-section tube diameter of the gun tube 2 inner-moving touch and the corresponding position of the gun body 4,
25 there sleeves onto fore-and-rear bundle bodies 42 and 43 between a holding cavity 41 wherein containing a pin body 44 which is freely to move up-and-down, said pin body 44 having a hole 441 penetrating through the top and the bottom

of the pin body 44 on the predetermined section, meanwhile an elastic element 45 is clipped between one end of the pin body 44 and the rear bundle body 43 such that the pin body 44 could form the shape of outer-prop in elasticity by the elastic element 45, on one end of the pin body 44 there is a hole 421
5 penetrating through the fore bundle body 42; besides, an infra-red receiver 81 and infra-red shooter 82 connected from the substrate 5 are respectively settled on the upper and lower orientation according to the position of the hole 441 of the pin body 44 upon the trigger 6 being un-pressed.

For such practice of shooting actuation of the paintball gun 1 in which the
10 gun tube 2 and the trigger 6 are respectively assembled with infra-red receivers and infra-red shooters, referring to FIG. 3, a user fills up paintballs 9 inside a loader 21, as illustrated at the left of FIG. 4, the paintballs 9 in the loader 21 will fall into the normal position of shooting of the gun tube 2 in sequence, thus, it will form the status of "ON" of which both lights for the infra-red receiver 71 and
15 infra-red shooter 72 assembled on both inner tube walls of the gun tube 2 are to be shielded, said message will be transferred onto the inner substrate 5 of the gun body 4 through the conducting wires 73 and 74, next, the user will press the trigger 6 with his or her finger, as illustrated at the right of FIG. 5, thus for the infra-red receiver 81 and infra-red shooter 82 assembled on the upper and
20 lower position of the trigger 6 it is at the status of "ON" that both lights are to be shielded, said message will be transferred onto the inner substrate 5 of the gun body 4 through the conducting wires 83 and 84, thus promoting the gun machine 3 sleeved on the end of the gun tube 2 could proceed actuation of shooting toward the paintball 9 on the normal position.

25 In addition, when the paintball 9 inside the loader 21 does not fall into the normal position of shooting in the gun tube 2 successfully, as illustrated at the right of FIG. 4, such that the infra-red receiver 71 and infra-red shooter 72

assembled on both inner walls of the gun tube 2 will form the status of "OFF" of which both lights are interconnecting, said message will be transferred onto the substrate 5 of the gun body 4 through the conducting wires 73 and 74 so that even the user presses and/or triggers the trigger 6 with his or her finger, it is still impossible to proceed the actuation of shooting toward the gun machine 3 on the end of the gun tube 2.

The paintball gun anti-blocking device according to this invention could settle another third switch on the inner substrate 5 of the gun body 4 as the function of cut-off the infra-red receiver 71 and infra-red shooter 72 on both inner walls of the gun tube 2 when the user proceeds the motion of clean-up the gun, which is also possible to press and trigger the trigger 6 from his or her finger to drive the gun machine 3 on the end of the gun tube 2 to proceed the motion of shooting actuation.

Besides, the active pin body 44 settled on the touch portion of the corresponding trigger 6 of the gun body 4 located on the paintball gun anti-blocking device according to this invention, the hole 441 penetrating through the top and the bottom of the pin body 44 could also be changed or modified into the normal trigger 6 wherein while it is at the status of non-press down it forms the status "OFF" of which it blocking the infra-red receiver 81 and infra-red shooter 82, which forms the message of blocking the bomb, besides, when the trigger 6 is pressed and triggered by the finger and moves the pin body 44 inwardly, the hole 441 penetrating through the top and the bottom of the pin body 44 will form the status of "ON" that the lights are interconnecting for the infra-red receiver 81 and infra-red shooter 82 to transfer itself onto the substrate 5 of the gun body 4 as the basis of shooting by the gun machine 3 on the end of the gun tube 2.

While the invention herein disclosed has been described by means of specific

embodiments, numerous modifications and variations could be made thereto by those skilled in the art without departing from the scope and spirit of the invention set forth in the claims.